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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/588,130   | 09/20/2008  | Pen Chung Li         | US040095 US2        | 3815             |
| 65913  | 7590        | 09/21/2010           | EXAMINER            |                  |
| NXP, B.V.<br>NXP INTELLECTUAL PROPERTY & LICENSING<br>M/S41-SJ<br>1109 MCKAY DRIVE<br>SAN JOSE, CA 95131 |             |                      | MIS, DAVID C        |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2817                |                  |
|  |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|  |             |                      | 09/21/2010          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/588,130 | <b>Applicant(s)</b><br>LI, PEN CHUNG |  |
|                              | <b>Examiner</b><br>David Mis         | <b>Art Unit</b><br>2817              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date : 0731 / July 31st, 2006.

1. The drawings are objected to because in Fig. 3, the blocks must be labeled with descriptive legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Claim 15 is objected to because of the following informalities: In line 1, "15.1." should be - - 15. - -. Appropriate correction is required.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-15 are rejected under 35 U.S.C. 102(a.) as being clearly anticipated by Askar et al (cited by Applicant).

Askar et al disclosed: (OCR copy)

1. (Original) A method of generating information symbols (pages 418-422), comprising: (a) turning on, for an  $i$ th predetermined length of time, during an  $i$ th time period,  $x_i$  frequency carriers, where  $0 \leq x_i \leq n$ , and  $1 \leq i \leq n$  (page 419, column 1, last paragraph: "... There is no need to restrict the number of transmitted pulses to the number of bands or time. In a time slot, zero or multiple pulses may be transmitted ..."; (b) determining whether  $n - \sum x_i = 0$ ; and (c) if the determination of (b) is negative, repeating (a) through (b); wherein  $x_i$  represents an integer number of frequency carriers, and  $n$  represents a total number of available frequency carriers (page 419, column 1, part II, first paragraph "... where each frequency is usually used only once during a symbol period ...").

2. (Original) The method of Claim 1, further comprising: (d) if the determination of (b) is affirmative, waiting for a period of time (Fig. 3: Guard Time).

3. (Original) The method of Claim 2, further comprising: subsequent to waiting for the period of time, repeating (a) through (c) (Fig. 3).

4. (Original) The method of Claim 3, wherein the period of time is a predetermined guard band that is disposed between information symbols (Fig. 3).

5. (Original) The method of Claim 4, wherein the information symbols occupy a frequency bandwidth greater than 500 MHz (frequency is not given weight).

6. (Currently Amended)

A method of transmitting symbols, each symbol having  $n$  modulation symbol times, with a transmitter having a set of  $n$  frequency carriers, comprising: providing (-30-2-) data to be transmitted; and determining (~4-)s-, based at least in part on the provided data, which frequency carriers, if

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any, of the set of  $n$  frequency carriers, are to be turned on during each of the  $n$  modulation symbol times, each modulation symbol time being of a predetermined amount of time; and turning on (306)-each of the frequency carriers as determined in (b) during each of the modulation symbol times; wherein each frequency carrier must be turned on for a period of time not greater than the modulation symbol time; and wherein each frequency carrier is turned on only once during the transmission of the symbol (See the above comments).

7. (Original) The method of Claim 6, wherein at least one modulation symbol time has no frequency carriers turned on (See the above comments).

8. (Original) The method of Claim 7, wherein at least one modulation symbol time has at least two frequency carriers turned on (See the above comments).

9. (Original) The method of Claim 8, wherein a BPSK modulation is used (page 419, column 2, first paragraph).

10. (Original) The method of Claim 6, wherein if  $n$  frequency carriers are turned on in one modulation symbol time, then no frequency carriers are turned on in the other  $n-1$  modulation symbol times (See the above comments).

11. (Original) The method of Claim 6, wherein the transmitted symbols occupy a frequency bandwidth greater than 500 MHz (See the above comments).

12. (Original) The method of Claim 6, wherein the transmitted symbols occupy a frequency bandwidth greater than 2 GHz (See the above comments).

13. (Original) The method of Claim 11, wherein the  $n$  frequency carriers transmit signals in  $n$  contiguous frequency bands, and  $n$  is an integer (See the above comments).

14. (Original) The method of Claim 11, wherein the  $n$  frequency carriers transmit signals in  $n$  non-contiguous frequency bands, and  $n$  is an integer (See the above comments).

15.1. (Original)

A method of transmitting ultra wideband symbols, comprising: (a) turning on, for an  $i^{\text{th}}$  predetermined length of time, during an  $i^{\text{th}}$  time period,  $x_i$  frequency carriers, where  $0 \leq x_i \leq n$ , and  $1 \leq i \leq m$ ; (b) determining whether  $m$  time periods have expired; and (c) if the determination of (b) is negative, repeating (a) through (b); wherein  $x_i$  represents an integer number of frequency carriers,  $n$  represents a total number of available frequency carriers, and  $m$  represents a total number of time periods contained within each of the ultra wideband symbols (See the above comments).

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Mis whose telephone number is (571) 272-1765. The examiner can normally be reached on Monday through Thursday; 6-11 AM and 12-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David Mis/  
Primary Examiner, Art Unit 2817